# Biddeford Pool Quadrangle, Maine


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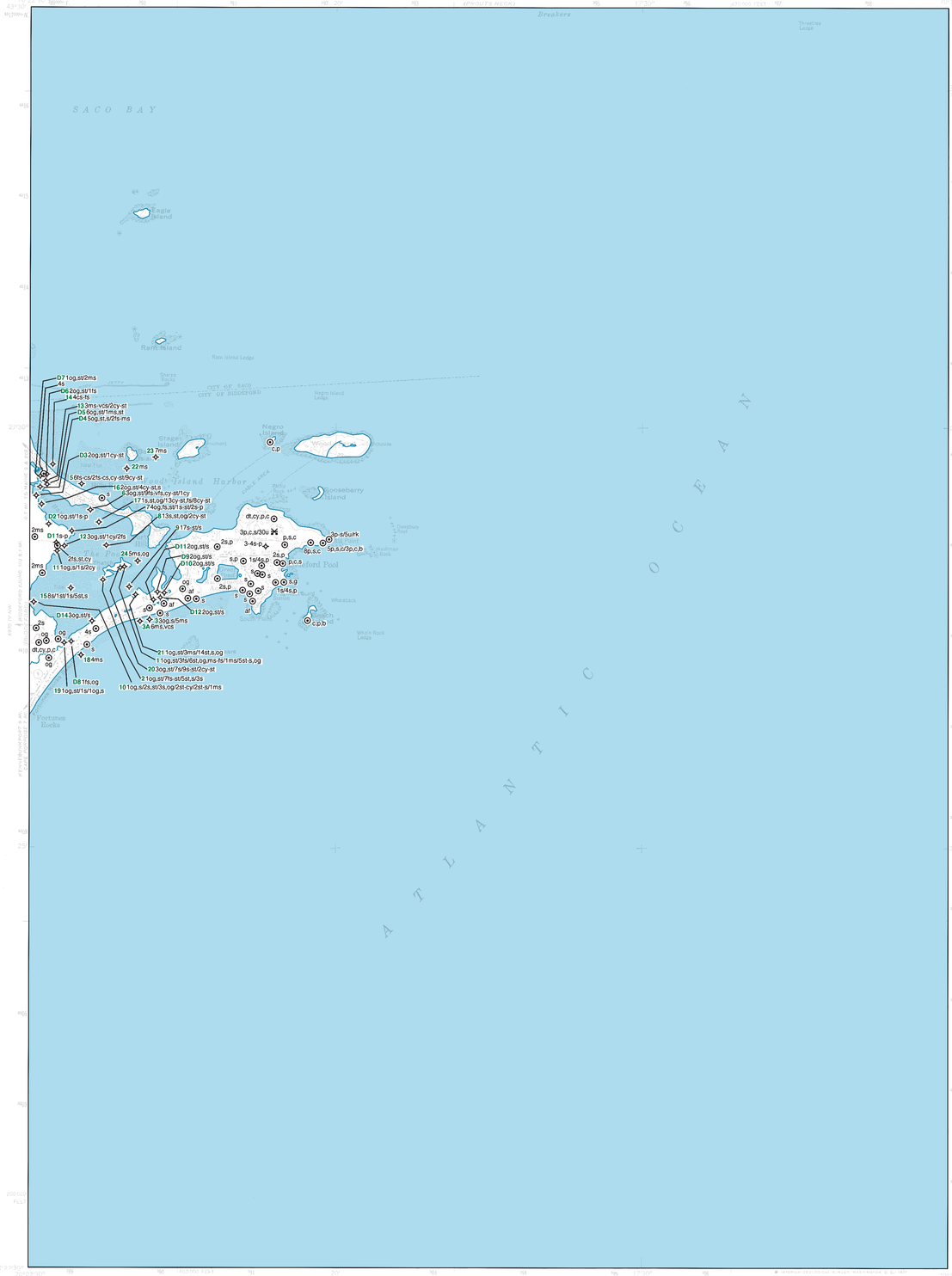
# Surficial Materials




## SOURCES OF INFORMATION

Materials mapping by Carol T. Hildreth completed during the 1987 field season; funding for this work provided by the U.S. Geological Survey COGEOMAP program. Supplemental materials data were collected by the significant aquifer mapping program during the 1997 field season, funded by the Maine Geological Survey and the Maine Department of Environmental Protection. Additional materials data sources include, but are not limited to, municipal water company records, U.S. Geological Survey Basic-Data Reports, Maine Geological Survey bedrock well database and published bedrock geology maps, Maine Department of Environmental Protection site files, Maine Department of Transportation highway construction records, and the Maine Department of Human Services public water-supply well database.

This map shows the textures of surficial sediments in the quadrangle, independent of interpretations regarding their origin. For example, poorly sorted sediments deposited directly from glacial ice are shown here as "diamicton," although they may be genetically classified as "till."

The symbols listed below indicate materials observed in borrow pits and other surface exposures, as well as subsurface data from various sources. Where more than one textural class is present, materials are separated by commas and listed in decreasing order of abundance (e.g. s, st, cy). Individual materials may occur in distinct layers, or they may be mixed. Hyphens show the ranges of particle sizes present where their relative abundances are uncertain (e.g. st-c). Slash marks indicate superposition of materials; thicknesses are in feet (e.g. 10s/3cy). "Σ" indicates a significant stratigraphic sequence of interbedded materials. Some borrow pits and other localities may be designated by numbers that refer to descriptions in the quadrangle text. Not all symbols will necessarily be found on the map.

**GRAVEL** **g** Undifferentiated gravel, used as a general term. Can be subdivided by size as follows:

| | | |
|---|---|---|
| **b** | Boulder gravel | >256 mm (10") |
| **c** | Cobble gravel | 64-256 mm (2.5-10") |
| **p** | Pebble gravel | 2-64 mm (0.1-2.5") |

**MIXED UNITS** **gs** Gravelly sand (this is a special case for sand with lesser amounts of intermixed gravel, i.e. pebbly sand, cobbly sand, or bouldery sand)

**sg** Sand and gravel (used only to describe slumped face or other site where relative abundances of sand vs. gravel are unknown).

**SAND** **s** Undifferentiated sand, used as a general term. Can be subdivided by size as follows:

| | | |
|---|---|---|
| **vcs** | Very coarse sand | (1-2 mm) |
| **cs** | Coarse sand | (0.5-1 mm) |
| **ms** | Medium sand | (0.25-0.5 mm) |
| **fs** | Fine sand | (0.125-0.25 mm) |
| **vfs** | Very fine sand | (0.0625-0.125 mm) |

**SILT** **st** Silt (0.002-0.0625 mm)

**CLAY** **cy** Clay (<0.002 mm)

**DIAMICTON** **d** Undifferentiated diamicton (poorly-sorted sediment in which particle sizes may range from clay to boulders). Used as a general term or subdivided as follows:

| | |
|---|---|
| **dg** | Gravelly -matrix diamicton |
| **ds** | Sandy -matrix diamicton |
| **dt** | Silty -matrix diamicton |
| **dy** | Clayey -matrix diamicton |

**Note:** Diamictons of glacial origin may be classified as one of the following varieties of till (shown on the map in parentheses):

| | |
|---|---|
| **t** | Till, undifferentiated. Usually of late Wisconsinan age (deposited by the last glacial ice sheet). |
| **ta** | Ablation till. Deposited during retreat of the late Wisconsinan ice sheet. Typically sandy, stony, and not very compact. |
| **tl** | Lodgement till. Inferred to have been deposited at the base of the late Wisconsinan ice sheet. Usually very compact. |
| **tf** | Flowtill. Deposited by slumping adjacent to glacial ice. |
| **T** | Variably weathered till (usually a lodgment facies) of inferred pre-late Wisconsinan age. |

**ORGANIC MATERIALS** **og** Organic-rich sediment (can be any organic material, including forest litter, wood, shells, etc.)

**pt** Peat (reserved for actual fibrous peat)

**OTHER MATERIALS**

| | |
|---|---|
| **af** | Artificial fill (e.g. road fills, building sites, dumps) |
| **bd** | Scattered boulders; interpreted as till where followed by (t) |
| **rk** | Bedrock (observed in pit floor, boring, or natural exposure) |
| **rs** | Rottenstone, disintegrated or weathered bedrock, saprolite, |
| **u** | Unknown (material unidentified) |
| **R** | Refusal (in test boring or well) |
| **(f)** | Fossiliferous (used to indicate fossiliferous units within a sequence). |

| | |
|---|---|
| **8s-b** | Materials data from shovel hole, hand-auger hole, natural exposure, or excavation (other than borrow pit). |
| **56** | Depth to bedrock from well (≥ is used to indicate minimum depth to bedrock), in feet below land surface |
| ● | Bedrock well |
| ◓ | Drilled overburden well |
| ■ | Dug well |
| ↓ | Driven point |
| **20fs,st** | Observation well with materials data |
| **10gs/rk** | Test boring with materials data |
| **s-b** | Borrow pit, recently active at time of mapping, with materials data. |
| **s-p** | Borrow pit, evidently abandoned or in long disuse at time of mapping, with materials data. |
| ⚒ | Quarry |
| 9 | Location of site for which a data sheet is on file at the Maine Geological Survey. |
| ● 56 | Depth to bedrock from seismic line, in feet below land surface |
| + | Bedrock outcrop |

## OTHER SOURCES OF INFORMATION


1. Hildreth, C. T., 1999, Surficial geology of the Biddeford Pool quadrangle, Maine: Maine Geological Survey, Open-File Map 99-79.
2. Thompson, W. B., 1979, Surficial geology handbook for coastal Maine: Maine Geological Survey, 68 p. (out of print)
3. Thompson, W. B., and Borns, H. W., Jr., 1985, Surficial geologic map of Maine: Maine Geological Survey, scale 1:500,000.